REV	Description	DATE	BY
Ver 1	Initial Release.		M
Ver 2	1 Replace HDMI Frame and SDIO Port voltage-level translation 2 Replaced USB2UART Chip		M
Ver 3	1 Add MDIO voltage-level translator 2 Modify CAN RX PULL voltage		
Ver 4	1 ADD GND_ADC to DGND 20150220 2 update sch version 3 clean sch 20150526		
Ver 5	1 replace the ethernetPhy		

PAGE NO.	SCHEMATIC PAGE
1	TITLE PAGE
2	BLOCK
3	Z7020_PL
4	Z7020_PS
5	Z7020_POWER
6	USB OTG
7	DDR3 MEMORY
8	QSPI FLASH
9	10/100/1000 ETHERNET
10	HDMI
11	Sensor: G&T,CAN
12	NAND_FLASH
13	PWR:1.0V&1.5V,VTT
14	Power 1.8V,3.3V&DCin
15	EXP CONN
16	MISC

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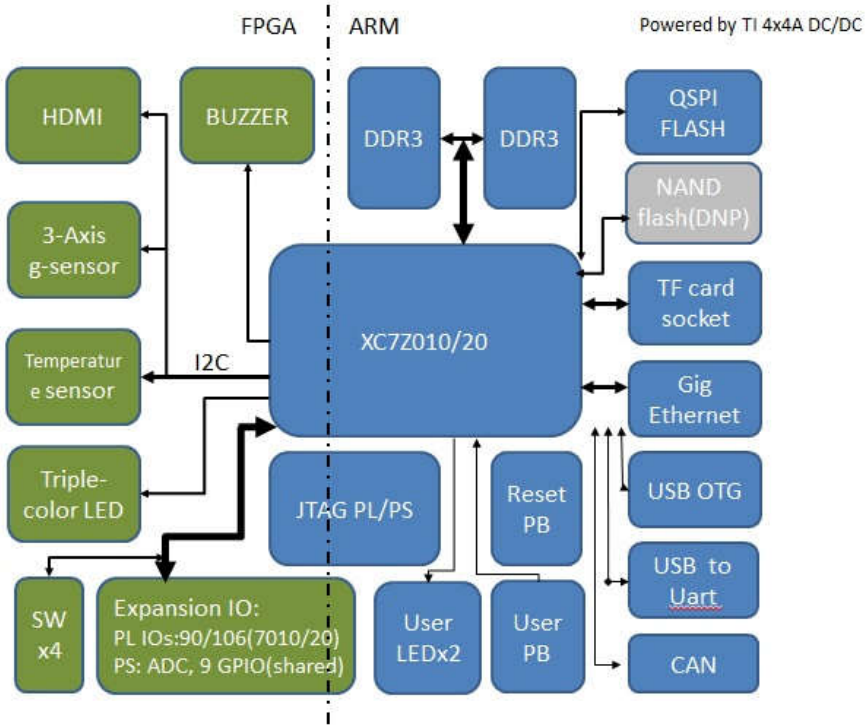

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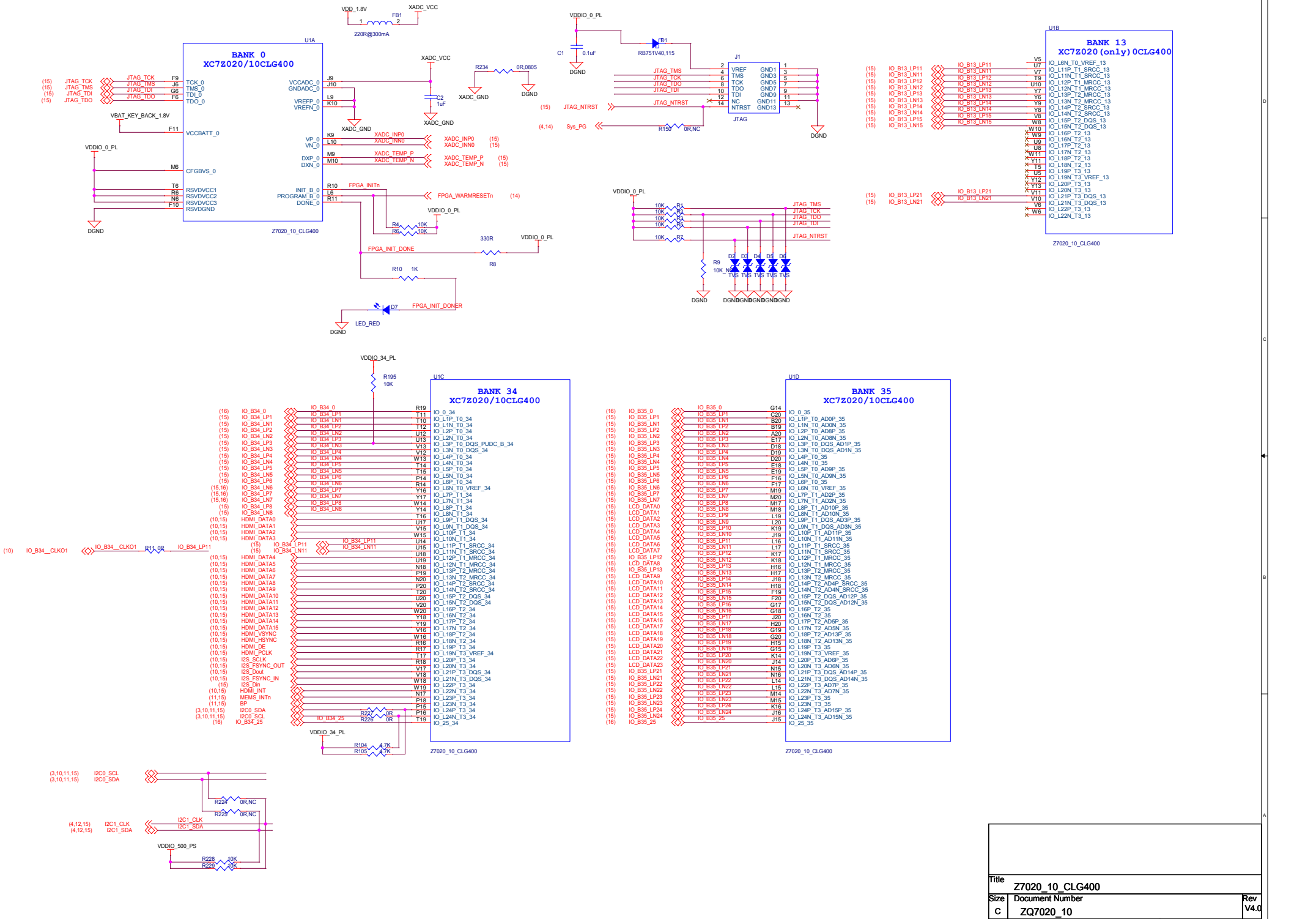
Date: Tuesday, November 20, 2018	Sheet 2 of 16	



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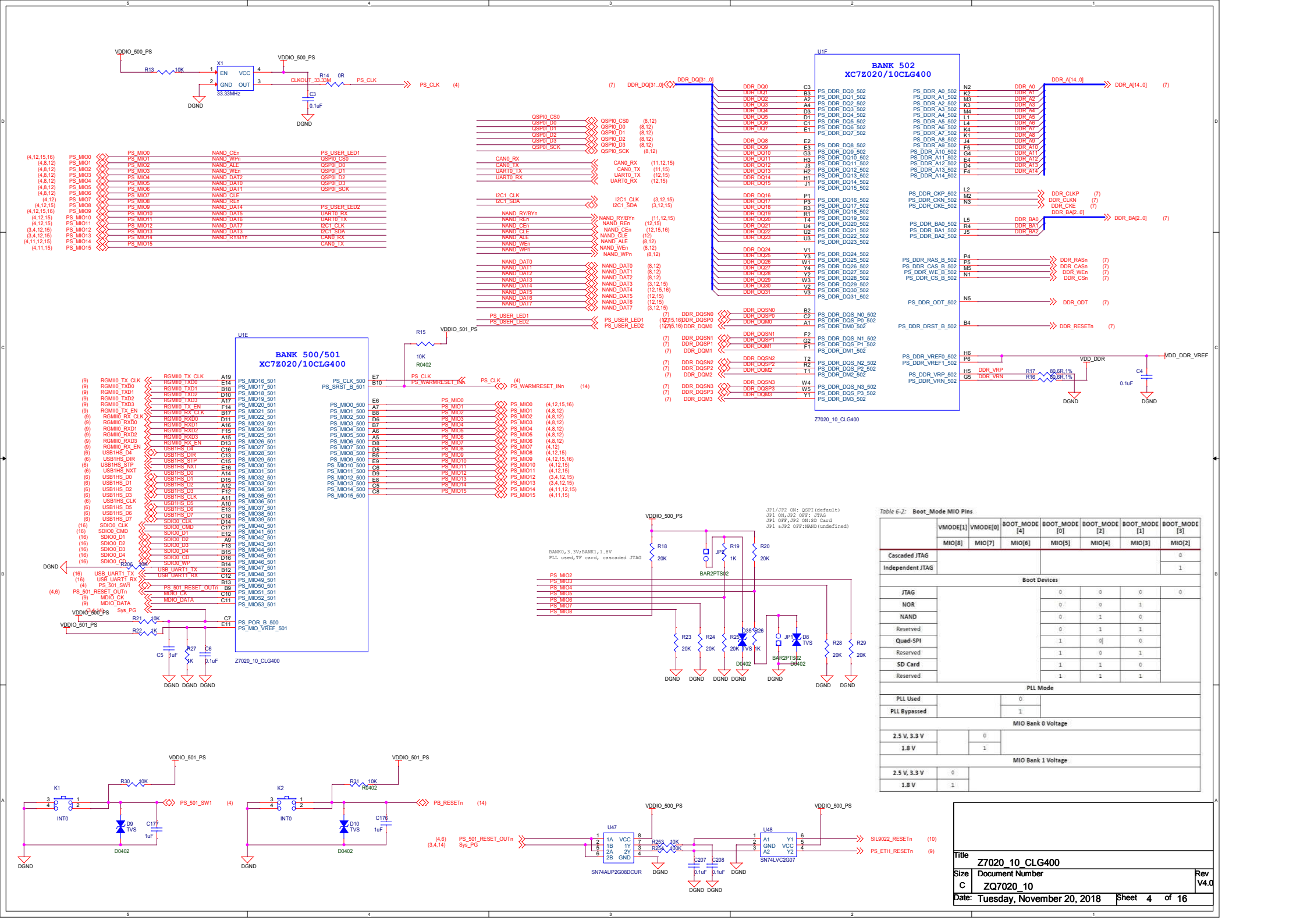
BANK 502
XC7Z020/10CLG400
U1F
Z7020_10_CLG400
BANK 500/501
XC7Z020/10CLG400
U1E
Z7020_10_CLG400
JP1/JP2 ON: QSPI(default)
JP1 ON,JP2 OFF: JTAG
JP1 OFF,JP2 ON:SD Card
JP1 &JP2 OFF:NAND(undefined)
BANK0,3.3V;BANK1,1.8V
PLL used,TF card, cascaded JTAG
Table 6-2: Boot_Mode MIO Pins
Boot_Mode MIO Pins
Cascaded JTAG
Independent JTAG
Boot Devices
JTAG
NOR
NAND
Reserved
Quad-SPI
Reserved
SD Card
Reserved
PLL Mode
PLL Used
PLL Bypassed
MIO Bank 0 Voltage
2.5 V, 3.3 V
1.8 V
MIO Bank 1 Voltage
2.5 V, 3.3 V
1.8 V
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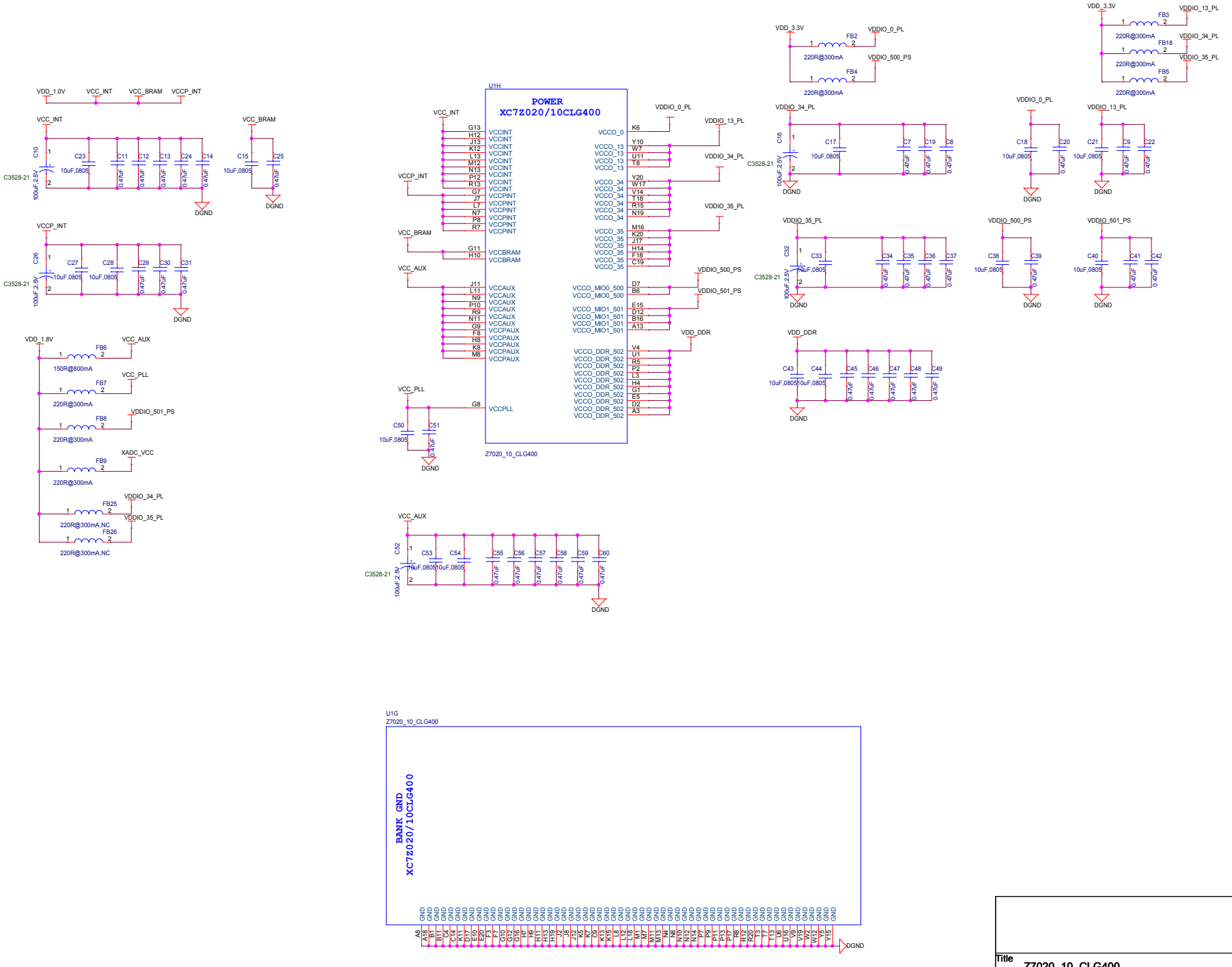

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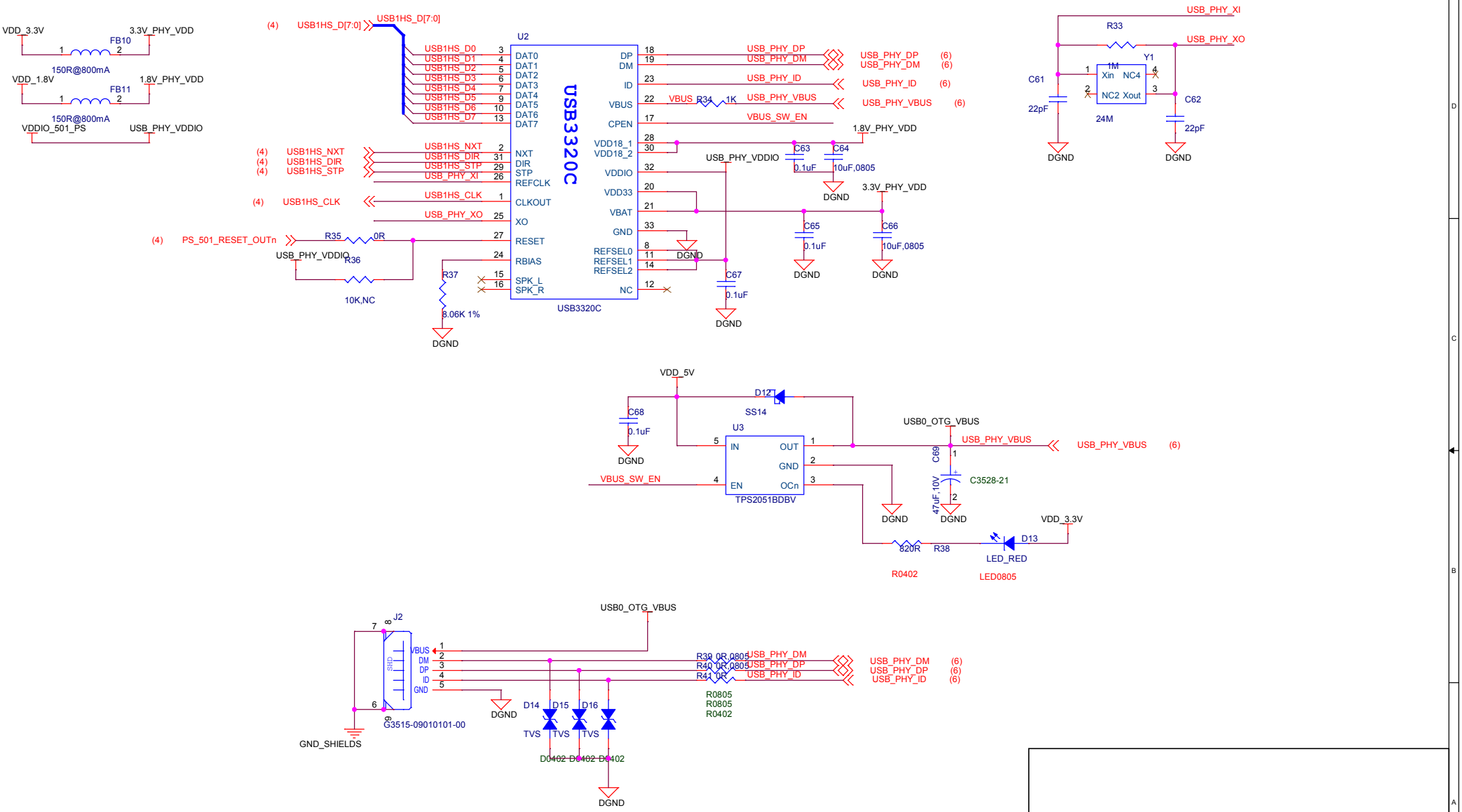

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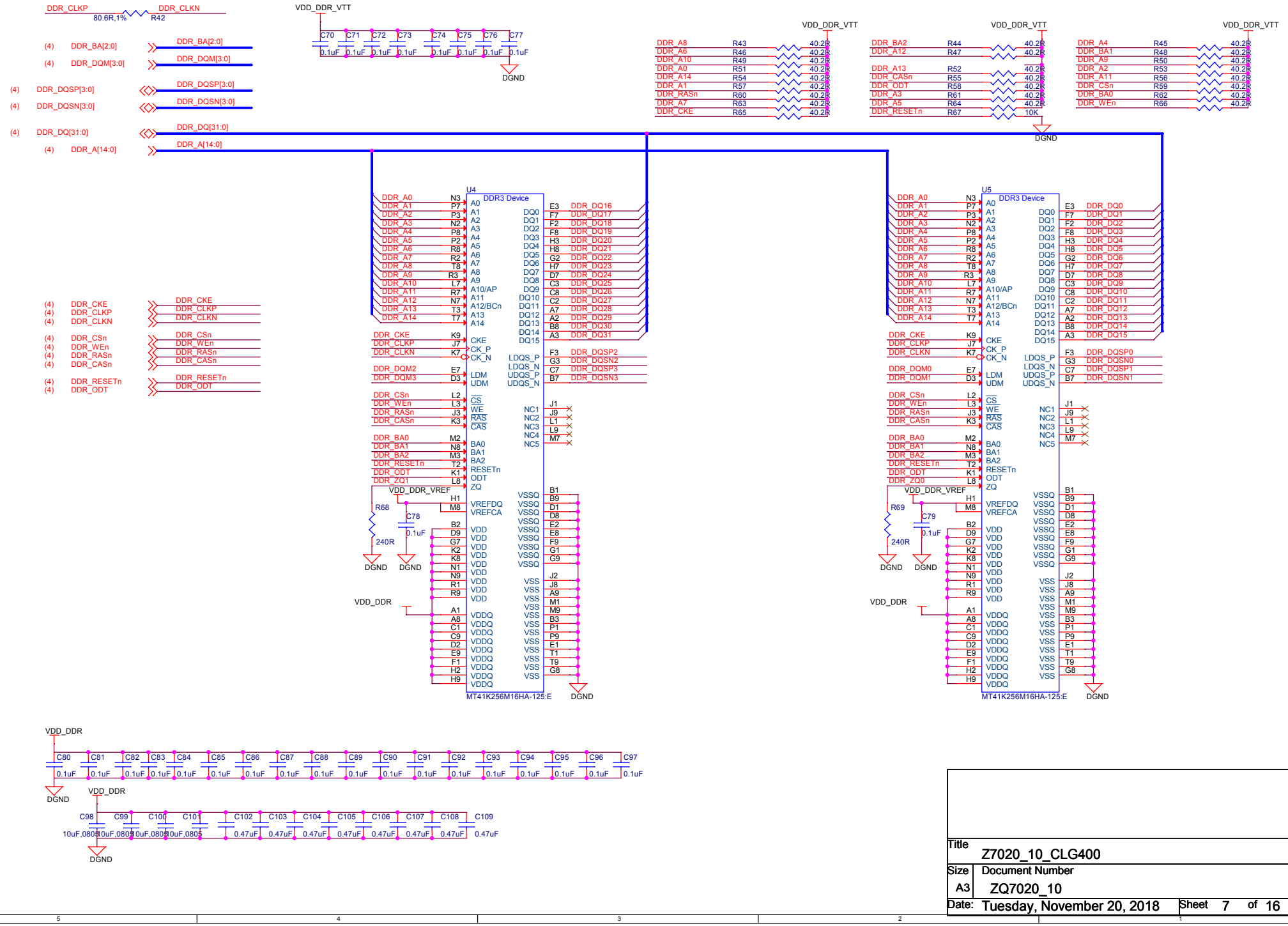
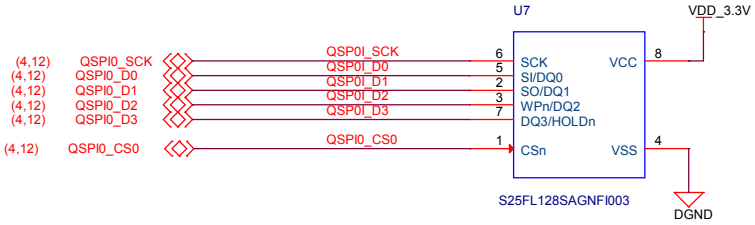
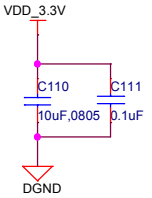
1024MB DDR3 (x32)







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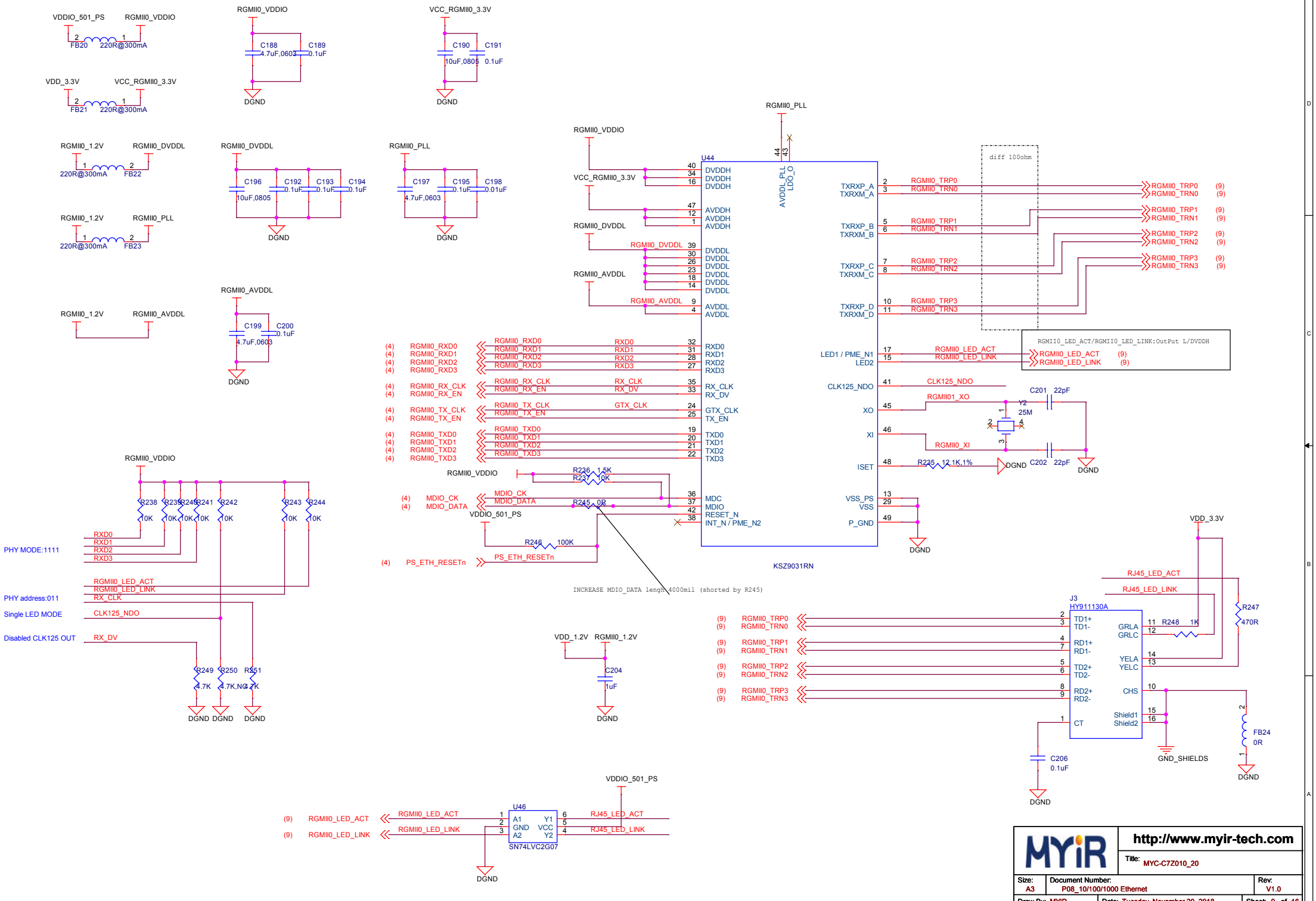

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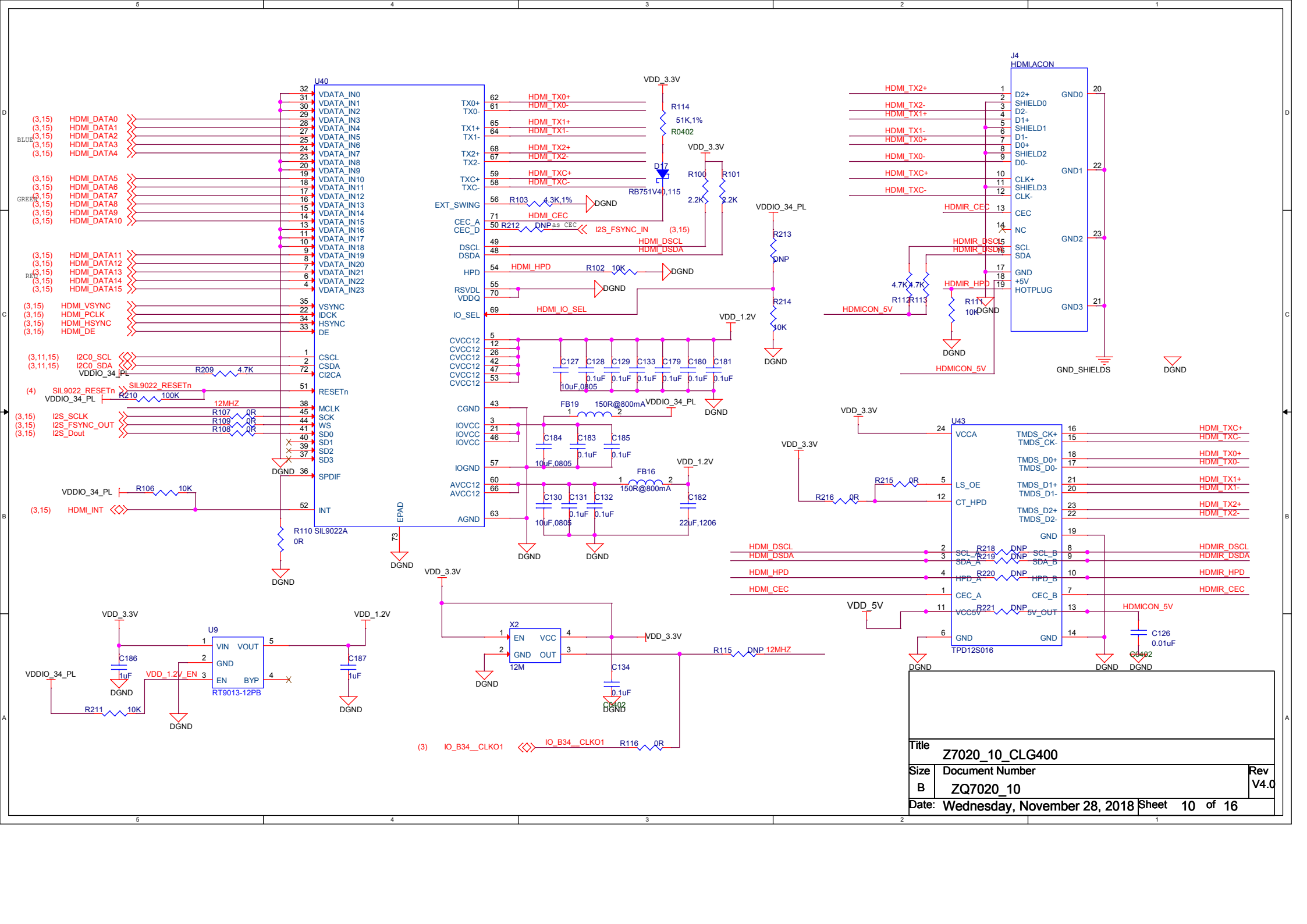
U40
VDATA_IN0
VDATA_IN1
VDATA_IN2
VDATA_IN3
VDATA_IN4
VDATA_IN5
VDATA_IN6
VDATA_IN7
VDATA_IN8
VDATA_IN9
VDATA_IN10
VDATA_IN11
VDATA_IN12
VDATA_IN13
VDATA_IN14
VDATA_IN15
VDATA_IN16
VDATA_IN17
VDATA_IN18
VDATA_IN19
VDATA_IN20
VDATA_IN21
VDATA_IN22
VDATA_IN23
VSYNC
IDCK
HSYNC
DE
CSCL
CSDA
CI2CA
RESETn
MCLK
SCK
WS
SD0
SD1
SD2
SD3
SPDIF
INT
EPAD
SIL9022A
TX0+
TX0-
TX1+
TX1-
TX2+
TX2-
TXC+
TXC-
EXT_SWING
CEC_A
CEC_D
DSCL
DSDA
HPD
RSVDL
VDDQ
IO_SEL
CVCC12
CGND
IOVCC
IOGND
AVCC12
AGND
HDMI_DATA0
HDMI_DATA1
HDMI_DATA2
HDMI_DATA3
HDMI_DATA4
HDMI_DATA5
HDMI_DATA6
HDMI_DATA7
HDMI_DATA8
HDMI_DATA9
HDMI_DATA10
HDMI_DATA11
HDMI_DATA12
HDMI_DATA13
HDMI_DATA14
HDMI_DATA15
HDMI_VSYNC
HDMI_PCLK
HDMI_HSYNC
HDMI_DE
I2C0_SCL
I2C0_SDA
SIL9022_RESETn
12MHZ
I2S_SCLK
I2S_FSYNC_OUT
I2S_Dout
HDMI_INT
HDMI_TX0+
HDMI_TX0-
HDMI_TX1+
HDMI_TX1-
HDMI_TX2+
HDMI_TX2-
HDMI_TXC+
HDMI_TXC-
HDMI_CEC
HDMI_DSCL
HDMI_DSDA
HDMI_HPD
HDMI_IO_SEL
I2S_FSYNC_IN
VDD_3.3V
VDD_1.2V
VDDIO_34_PL
DGND
R114 51K,1% R0402
D17 RB751V40,115
R100 2.2K
R101 2.2K
R103 4.3K,1%
R212 DNP as CEC
R102 10K
R213 DNP
R214 10K
R209 4.7K
R210 100K
R107 0R
R109 0R
R108 0R
R106 10K
R110 SIL9022A 0R
FB19 150R@800mA
FB16 150R@800mA
C127 C128 C129 C133 C179 C180 C181
10uF,0805
0.1uF
C184 C183 C185
C130 C131 C132
C182 22uF,1206
J4
HDMI,ACON
D2+
SHIELD0
D2-
D1+
SHIELD1
D1-
D0+
SHIELD2
D0-
CLK+
SHIELD3
CLK-
CEC
NC
SCL
SDA
GND
+5V
HOTPLUG
GND0
GND1
GND2
GND3
HDMIR_CEC
HDMIR_DSCL
HDMIR_DSDA
HDMIR_HPD
HDMICON_5V
4.7K
R111 10K
R112 R113
GND_SHIELDS
U43
VCCA
LS_OE
CT_HPD
TMDS_CK+
TMDS_CK-
TMDS_D0+
TMDS_D0-
TMDS_D1+
TMDS_D1-
TMDS_D2+
TMDS_D2-
SCL_A
SDA_A
HPD_A
CEC_A
VCC5V
SCL_B
SDA_B
HPD_B
CEC_B
5V_OUT
TPD12S016
R215 0R
R216 0R
R218 DNP
R219 DNP
R220 DNP
R221 DNP
C126 0.01uF
C0402
U9
VIN
VOUT
GND
EN
BYP
RT9013-12PB
C186 1uF
C187 1uF
VDD_1.2V_EN
R211 10K
X2
EN
VCC
GND
OUT
12M
R115 DNP 12MHZ
C134 0.1uF
IO_B34__CLKO1
R116 0R
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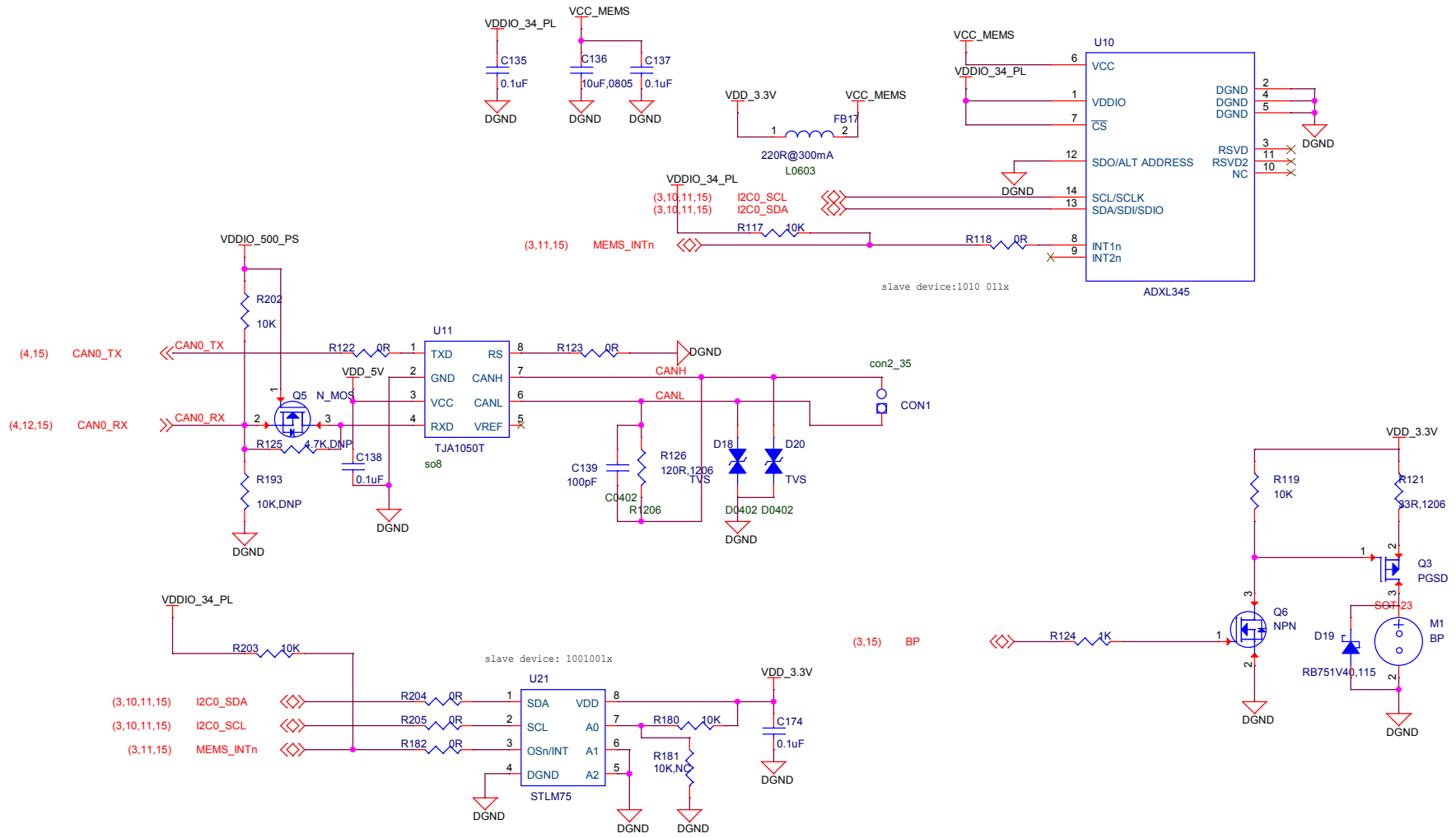

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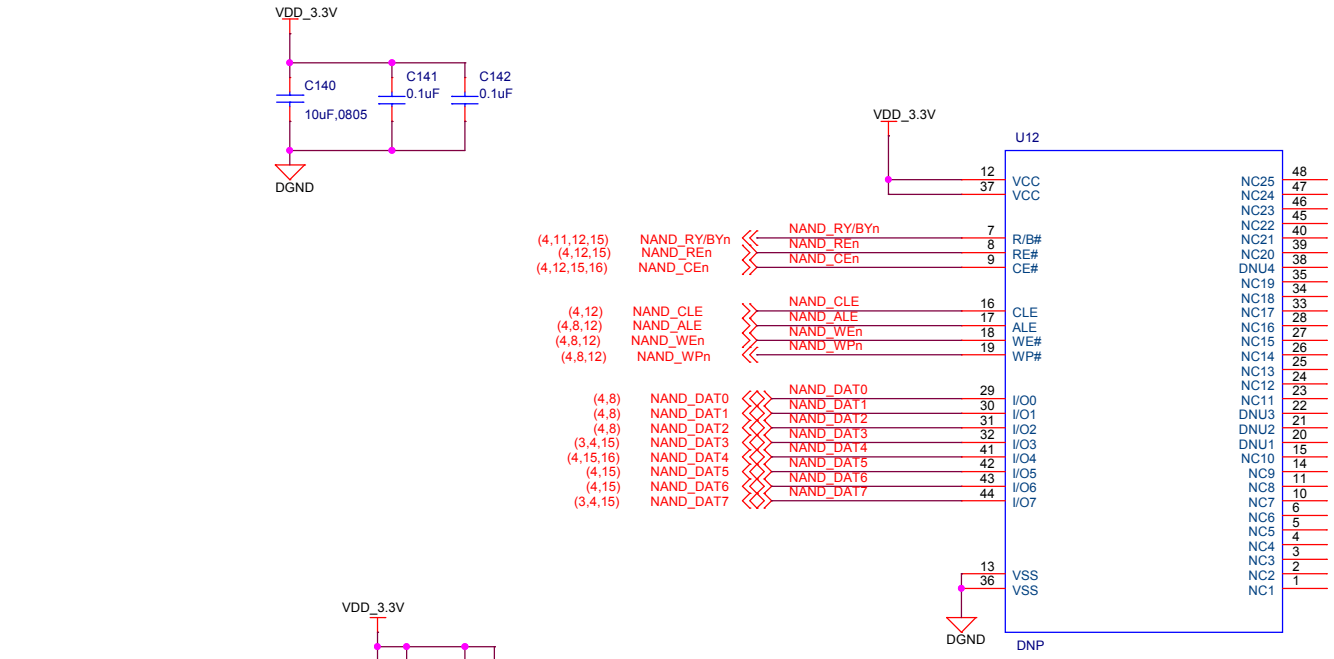

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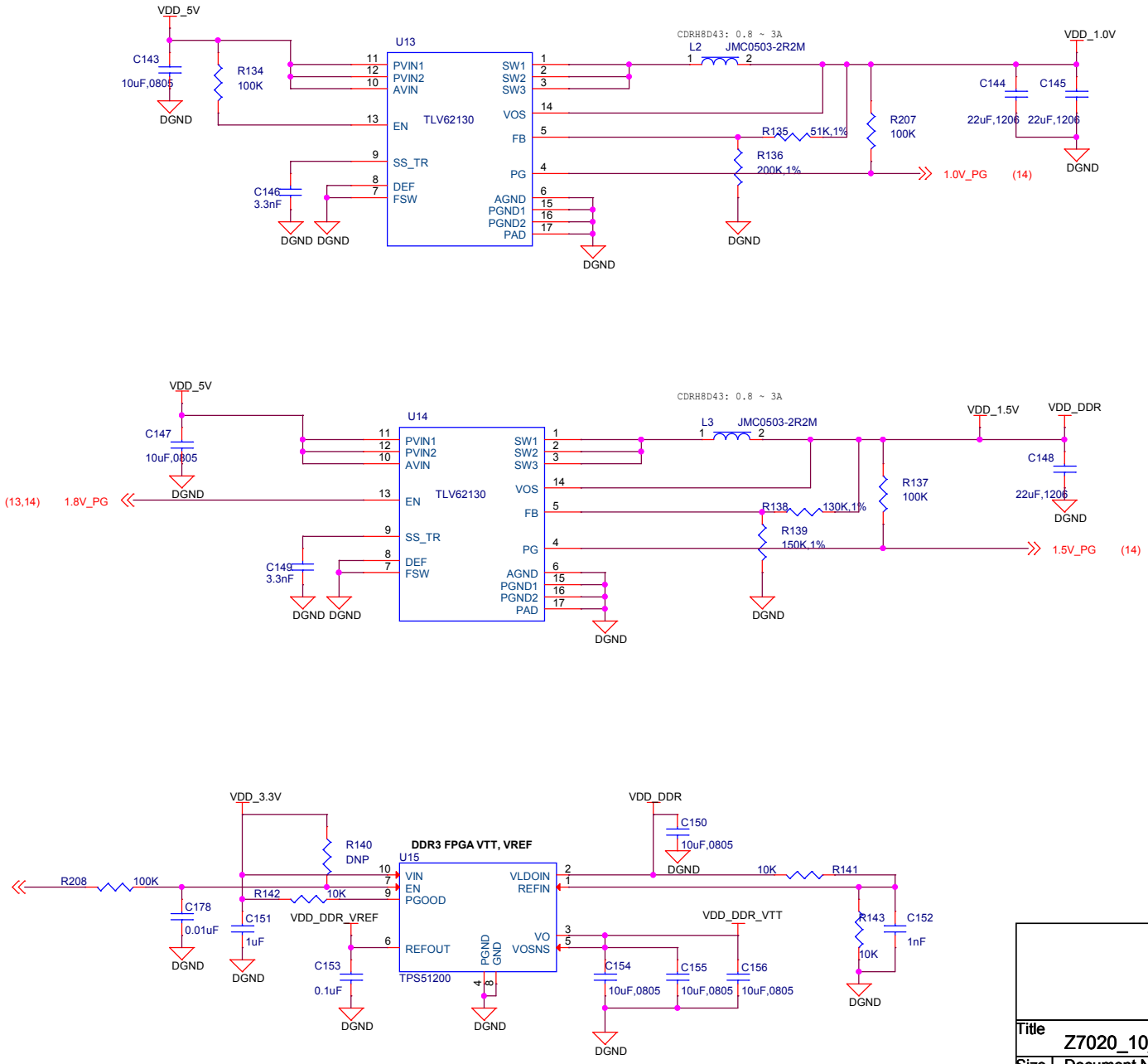

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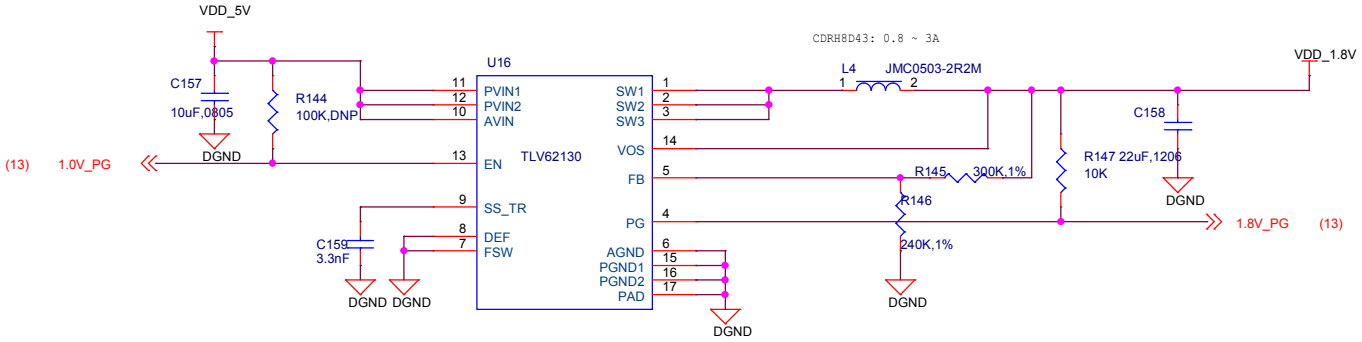

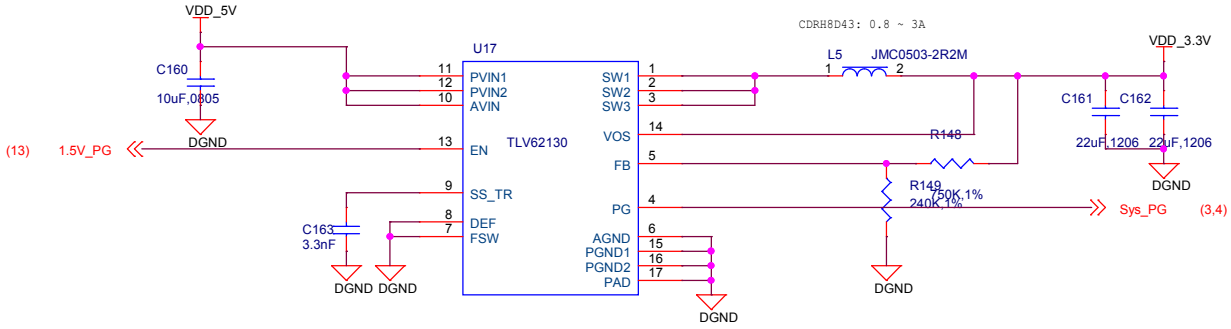

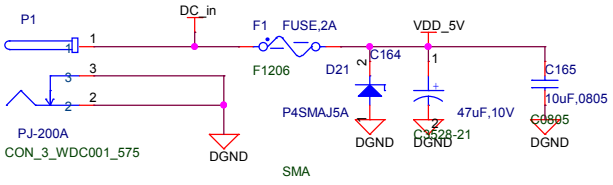

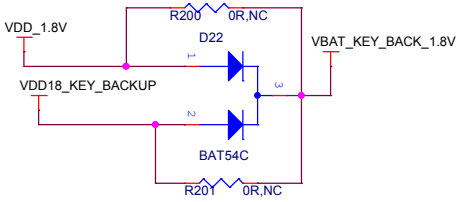

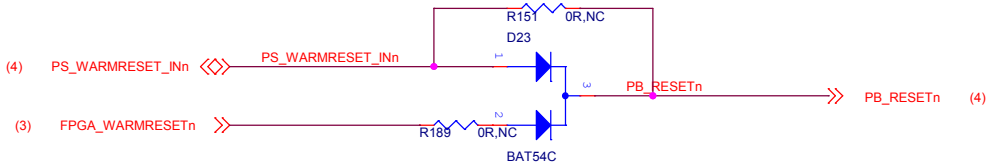

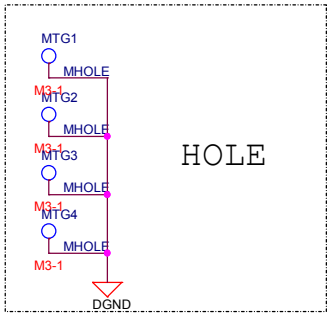

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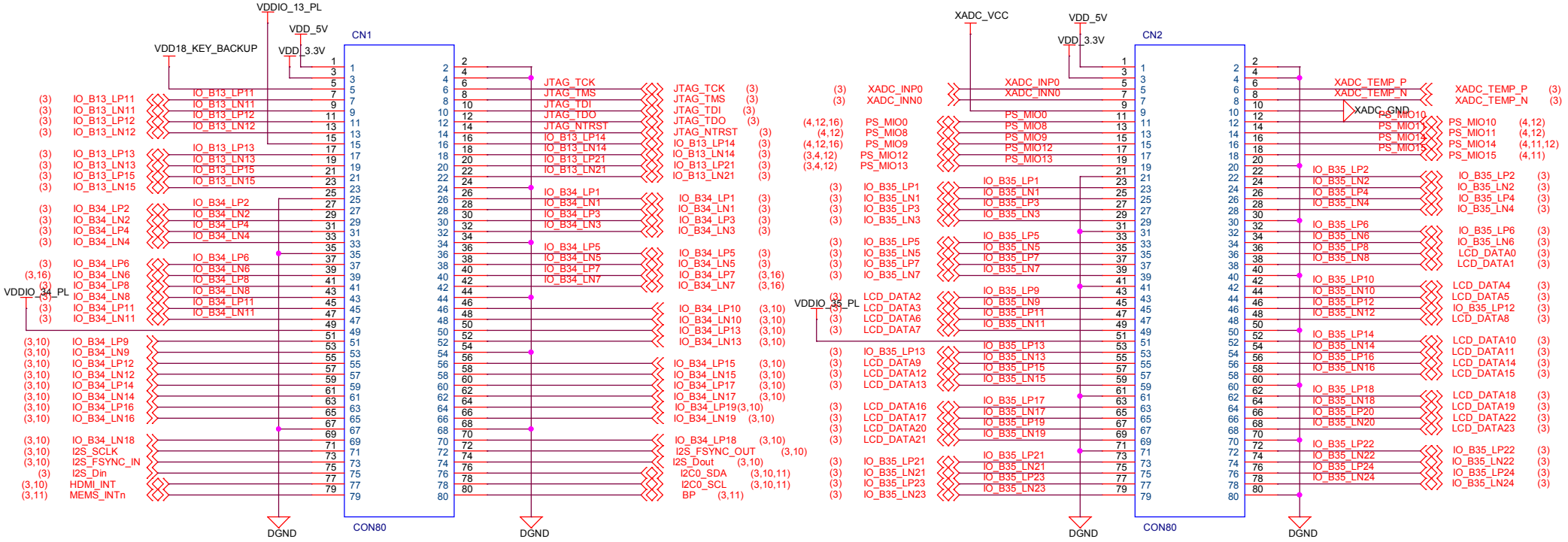

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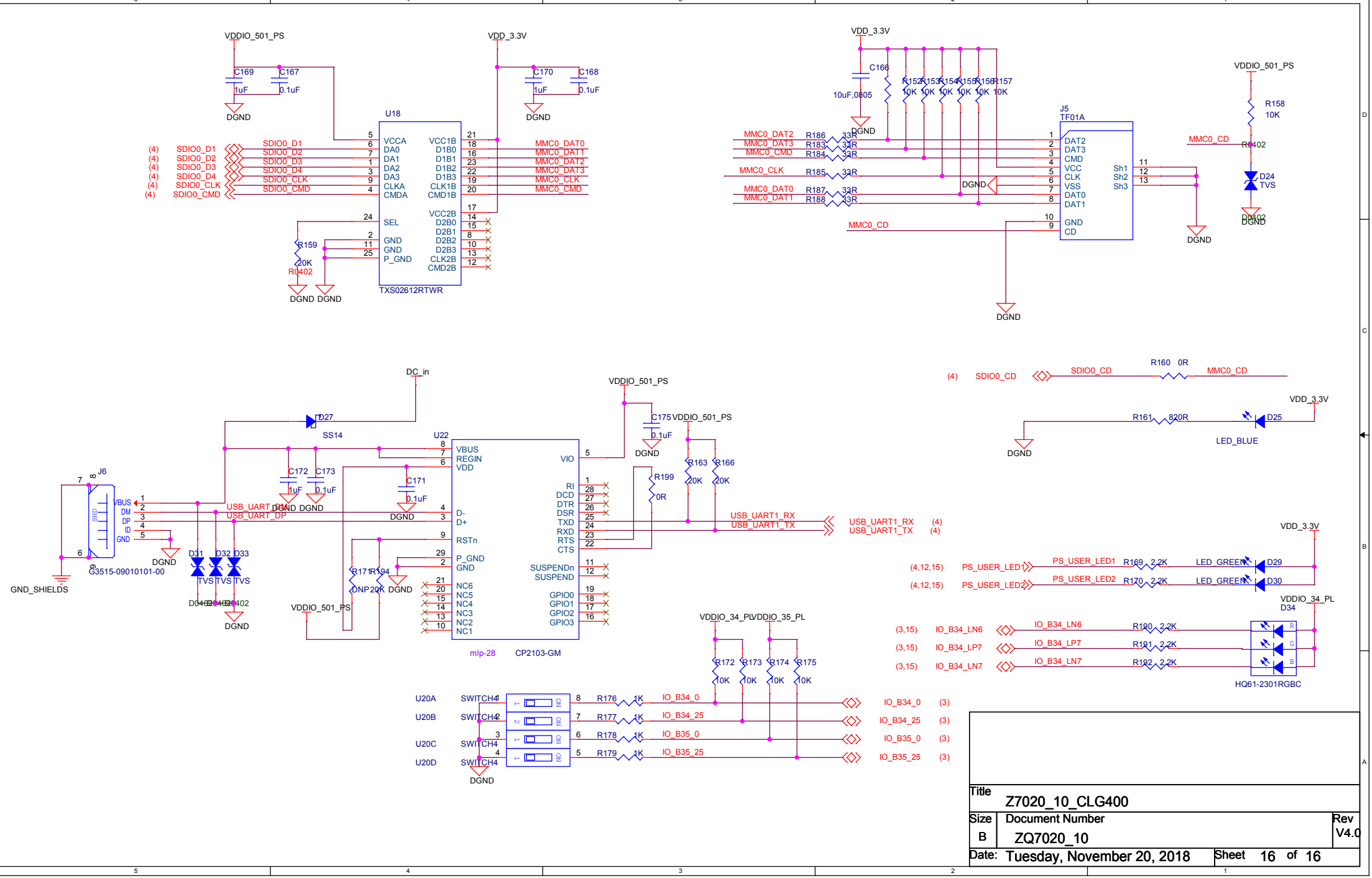

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